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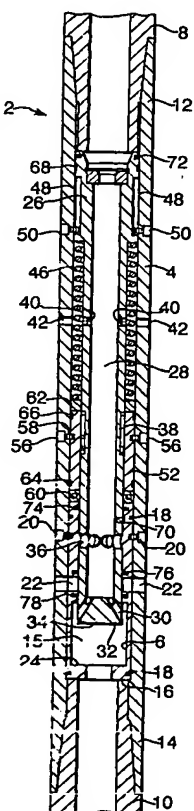
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(54) Title: **IMPROVED DOWNHOLE APPARATUS**



(57) Abstract: The invention relates to apparatus for use in wellbores and particularly, but not exclusively, to circulating subs used during downhole drilling operations. The apparatus (2) comprising a control groove (38) and a pin (not shown) received within the control groove (38) for determining whether or not a longitudinal movement of a piston (26) in a given direction relative to the apparatus body (4) will move the apparatus between open and closed configurations. The apparatus further comprises a control member (52) located between and movable relative to the body (4) and the piston (26). The control groove (38) is defined in one of the piston and control member, and the pin is provided on the other of the piston and control member. Means (48, 50) are also provided for constraining movement of the piston (26) relative to the body (4) to longitudinal movement only. The invention provides apparatus which has improved reliability in moving between open and closed configurations.

WO 2004/065756 A1



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